**Negative Selection Prediction**

Software Requirement Specification

For: Negative Selection Prediction

By: Jan Rosa

1. Introduction

A tool that can determine the particular cell fate of T-Cells maturing in the Thymus via negative selection.

1. Overall Description

Input: FASTA sequences of peptide antigen, MHC I and II binding region, and T-Cell antigen binding region.

Output: Whether a specific T-Cell survived negative selection. Survival is based on change in free energy after the TCell binds to the peptide antigen and the MHC is bound to the peptide. In comparing these free energies we can conclude that the lowest one has stronger affinity for the peptide.

1. Requirements:

Fasta file containing the AA sequences. Great Lakes Research cluster.